

# Railroad Impact Study

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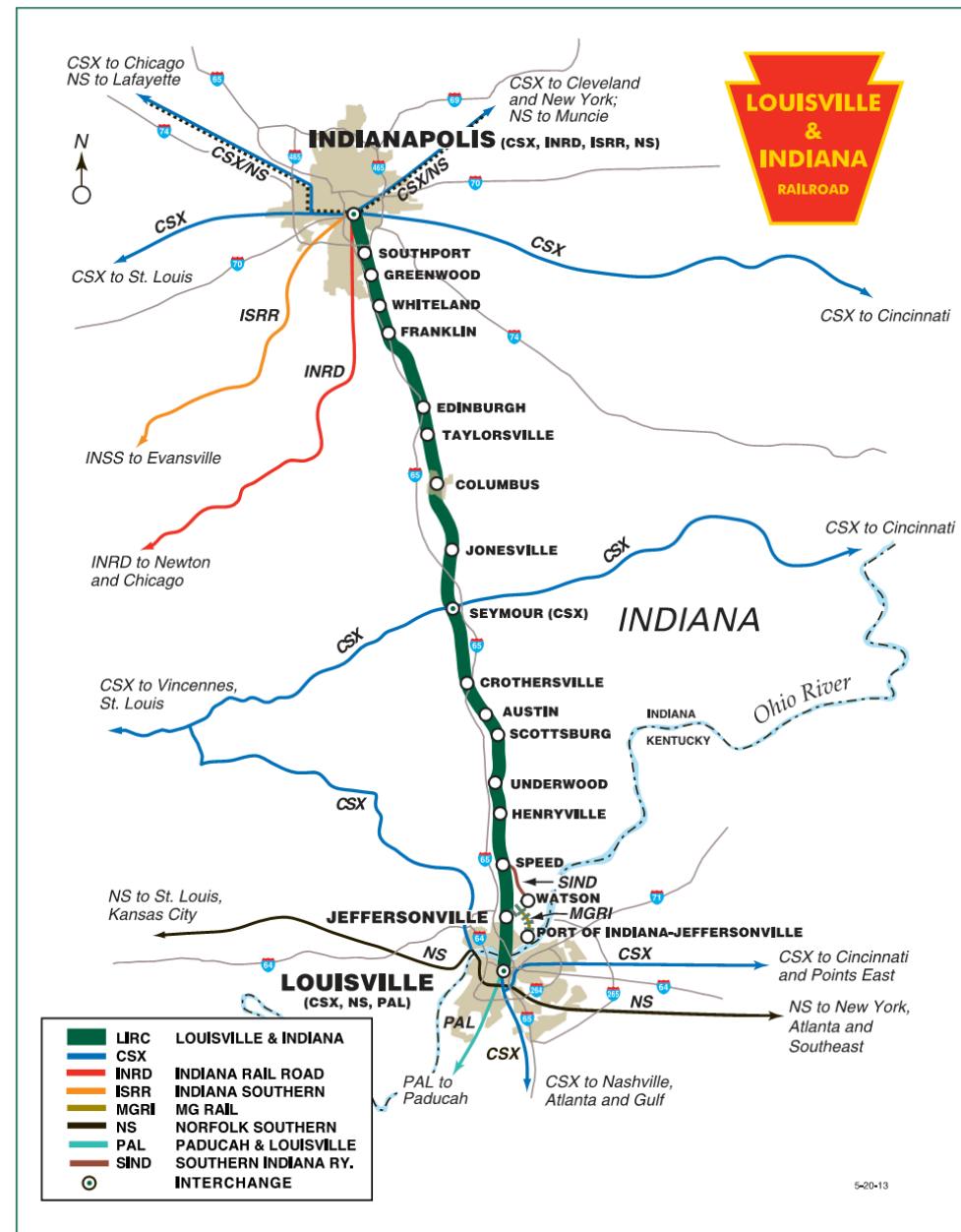


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# Study Impetus

- CSXT to lease and improve rail line between Louisville and Indianapolis
- Rail improvements will allow CSXT to make several changes to rail traffic in the corridor
- Changes to rail traffic are expected to be fully implemented by 2018



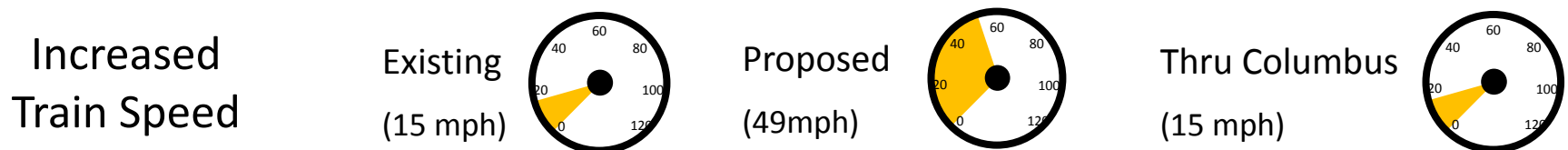
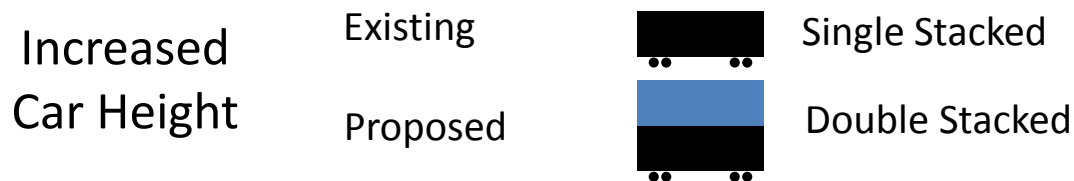
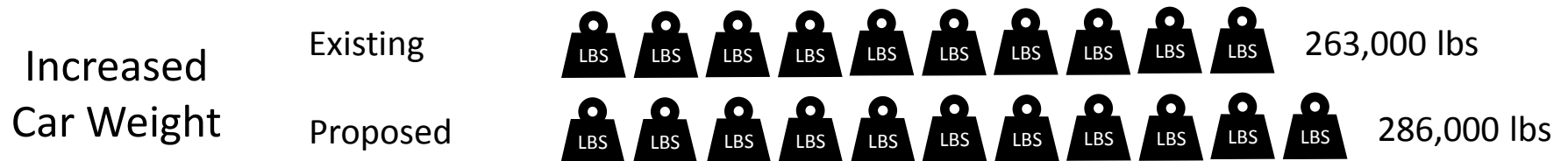
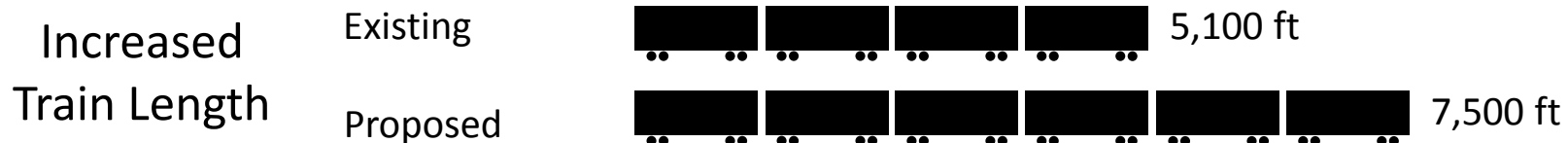
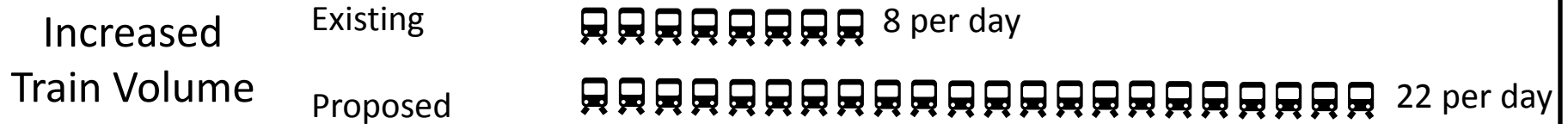
# Rail Improvements

- Continuously welded rail
  - Smoother ride
  - Higher speeds
- Bridge replacements/upgrades
  - Double Stacked Freight Cars
  - Heavier Loads
  - Flat Rock River Bridge (2017)



Courtesy [www.bridgehunter.com](http://www.bridgehunter.com)

# Rail Traffic Changes



# Environmental Analysis Document

## Surface Transportation Board

- Required CSXT to perform an Environmental Assessment of the proposed train changes
- Approved proposed changes in April 2015

## Environmental Assessment Document

- Studied 154 crossings between Louisville & Indianapolis
- 3 crossings in Columbus ranked in top 5 in terms of daily vehicle delay
  - SR 46
  - 8<sup>th</sup> Street
  - 11<sup>th</sup> Street
- No improvements proposed to crossings in Columbus



# RR Impact Study

- Identify Impact of Train Events
  - Traffic / Travel Time
  - Columbus Economy
- Identify Mitigation Options
  - Traffic / Travel Time
  - Economic Impact
  - Cost of Improvements

## Legend

1

Study Intersection With  
Adjacent Railroad Crossing

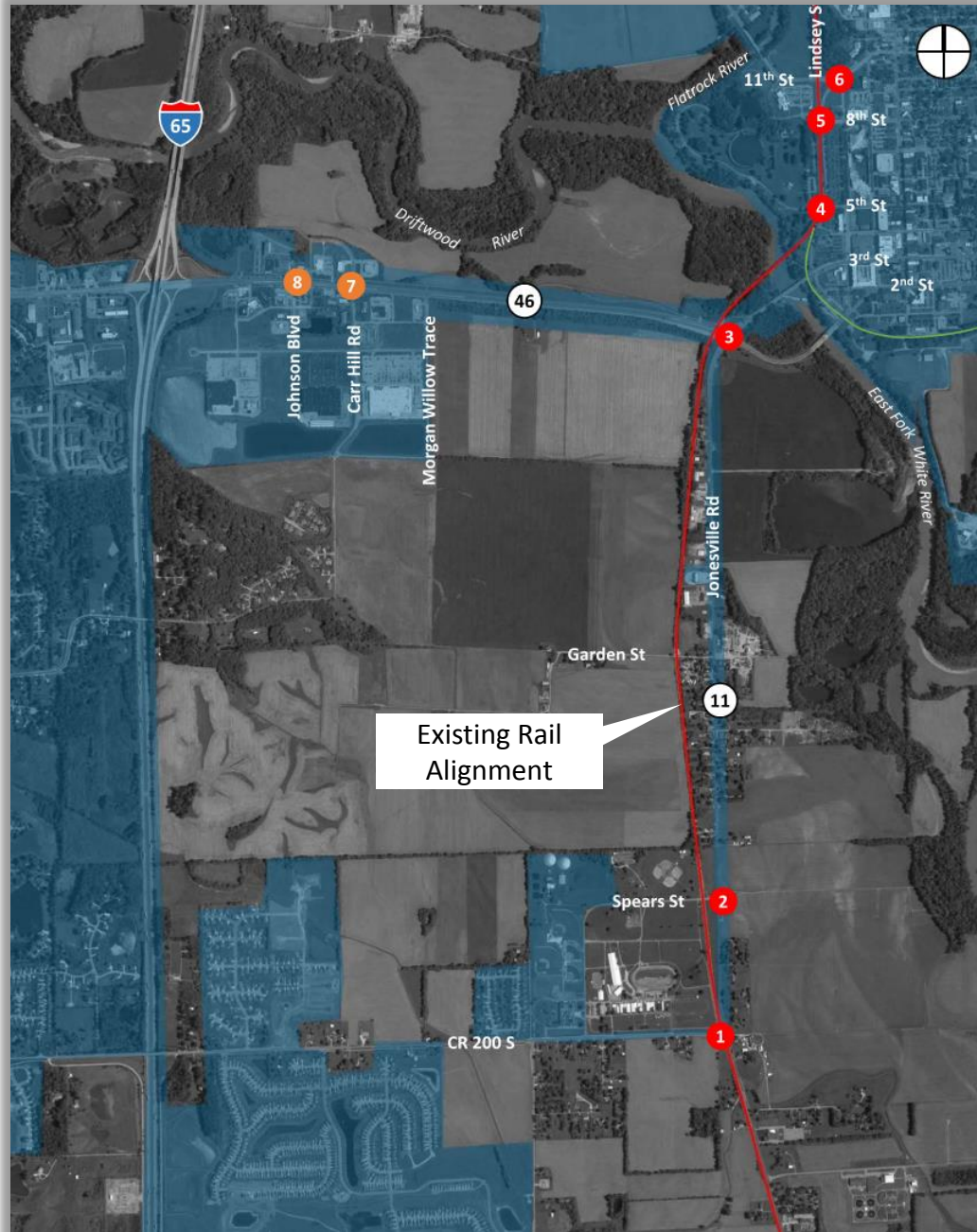
8

Study Intersection Without  
Adjacent RR Crossing

City Limits

Mainline Track

Spur



# Study Area

- Major roadways & crossings
  - CR 200 S
  - Spear Street
  - SR 46
  - 5th Street
  - 8th Street
  - 11th Street
- Intersections along SR 46
  - Johnson Blvd
  - Carr Hill Rd

## Legend

1

Study Intersection With  
Adjacent Railroad Crossing

8

Study Intersection Without  
Adjacent RR Crossing



City Limits



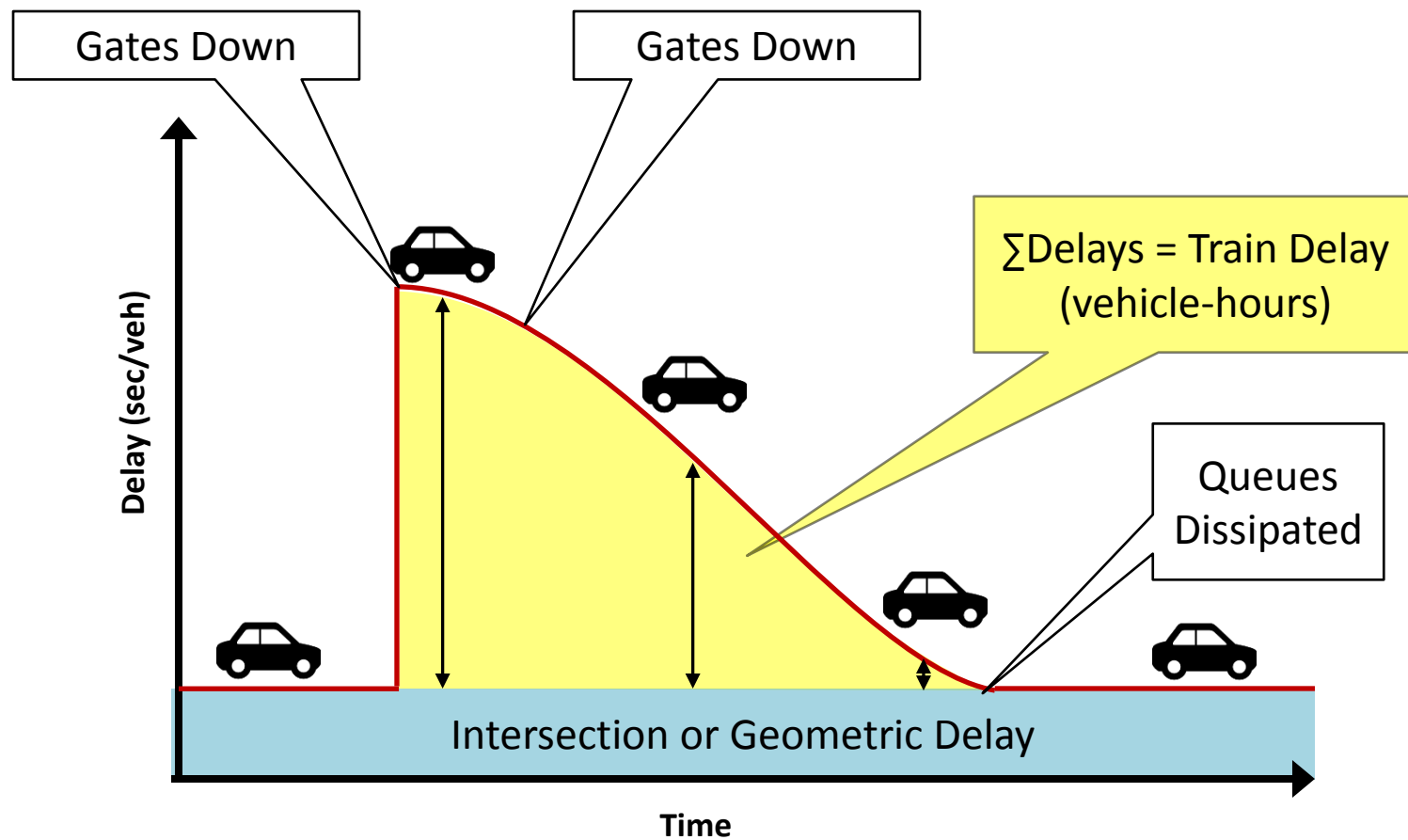
Mainline Track



Spur



# Train Delay

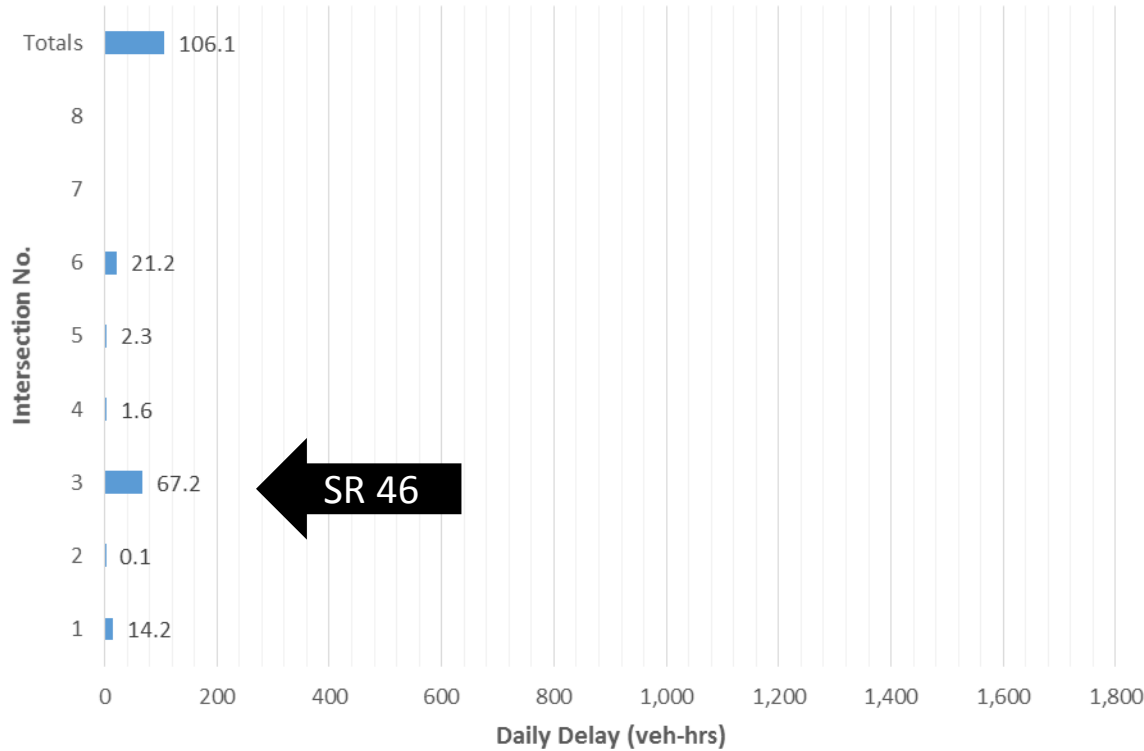




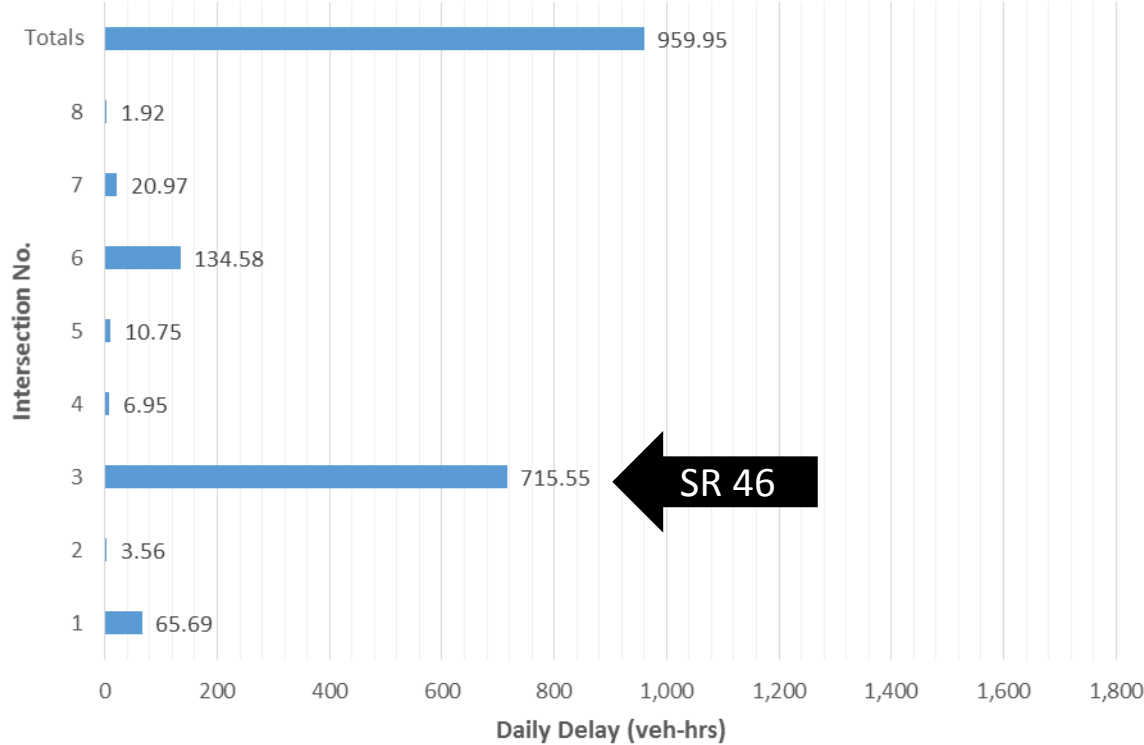
# Train Delay

- Multiple Time Periods
  - AM (6am-10am)
  - Midday (10am-2pm)
  - PM (2pm-6pm)
  - Off-Peak (6pm-6am)
- Multiple Years
  - Current (2016)
  - Opening (2018)
  - Future (2036)
- Use industry accepted methodology & software
  - Highway Capacity Manual
  - PTV VISSIM Software

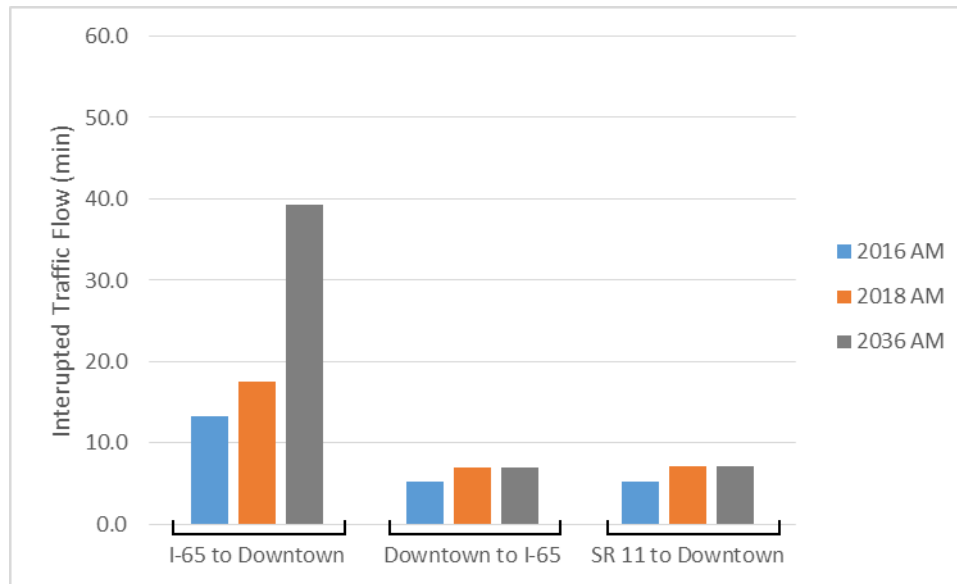
# 2016 Train Delay (Daily Basis)



# 2018 Train Delay (Daily Basis)



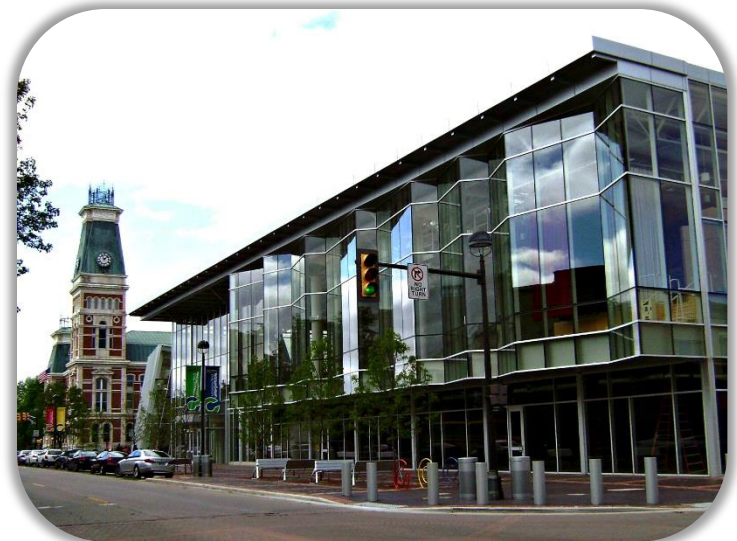
# SR 46 & SR 11 (AM Peak Hour)



Chance of being delayed: 22%

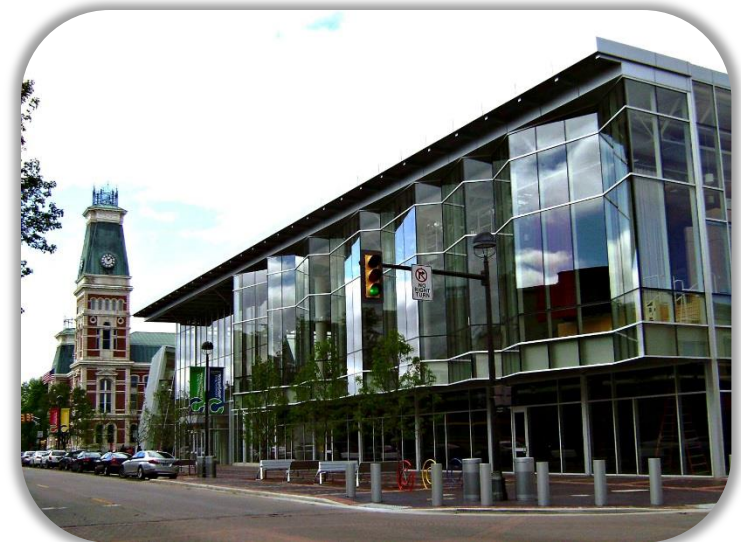
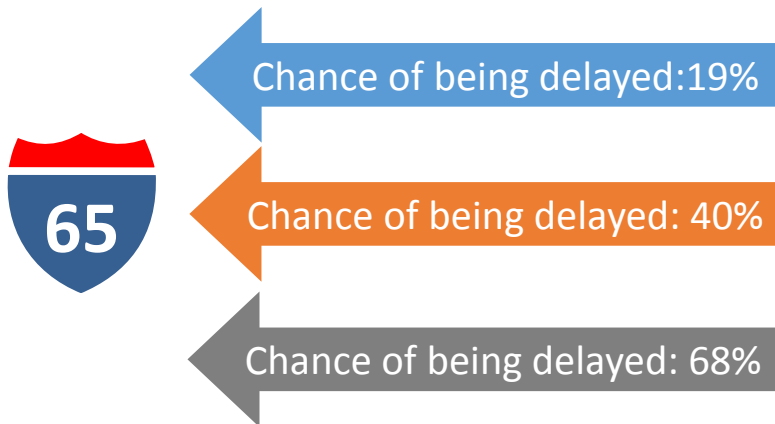
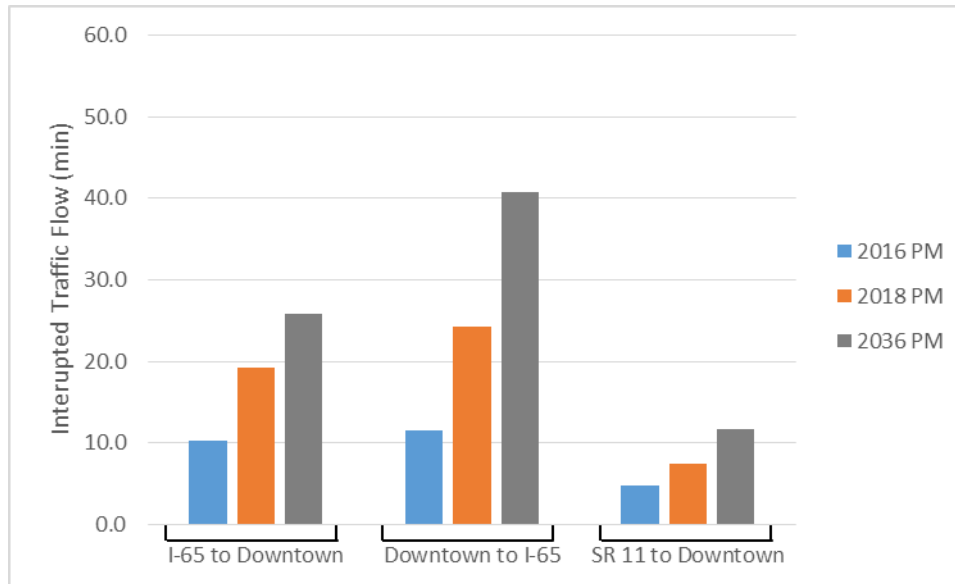
Chance of being delayed: 29%

Chance of being delayed: 66%

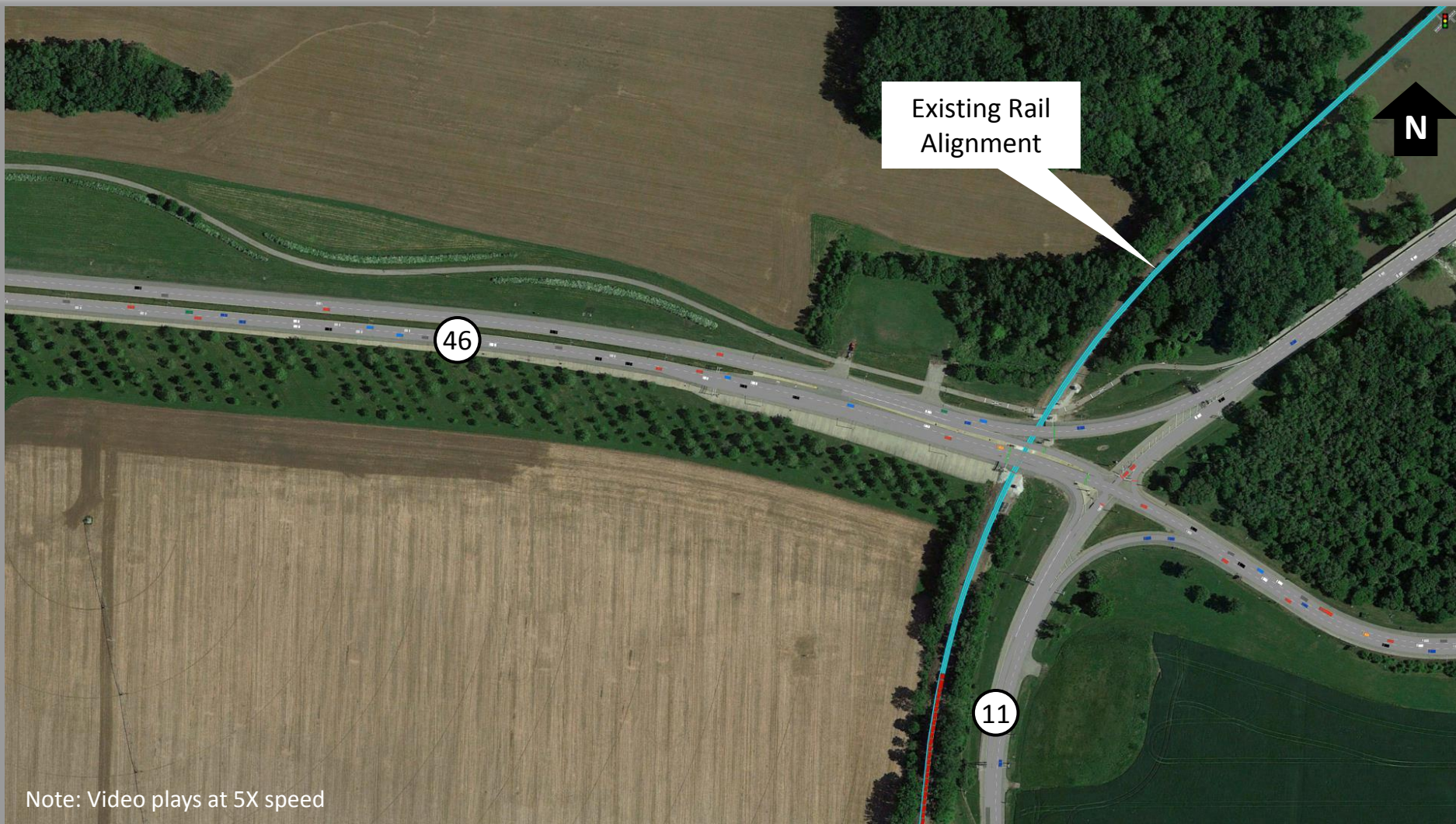




# SR 46 & SR 11 (PM Peak Hour)



# Traffic Simulation



# Economic Impact of Rail Delay

An event that may have a positive overall regional benefit can impact local subareas negatively. This is known as an externality.

# Local Columbus Impact

Travel delays resulting from increased rail traffic impose costs on the Columbus regional economy.



# Commuter Cost

Individuals commuting to and from work experience longer, and more unpredictable trip times, and more unproductive hours on the road.

# Business Cost

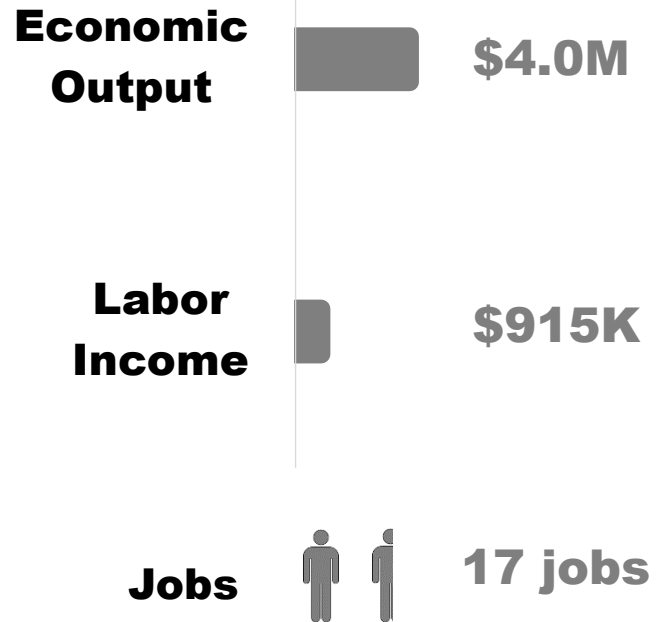
Businesses are affected by increased transportation cost, reduced access to supplies, and delays in inventory control and production.

# Passenger Cost

Individuals who experience delays while traveling for non-business reasons lose time that is valuable to them. This loss can be quantified in economic terms.

# Base Year Economic Impact

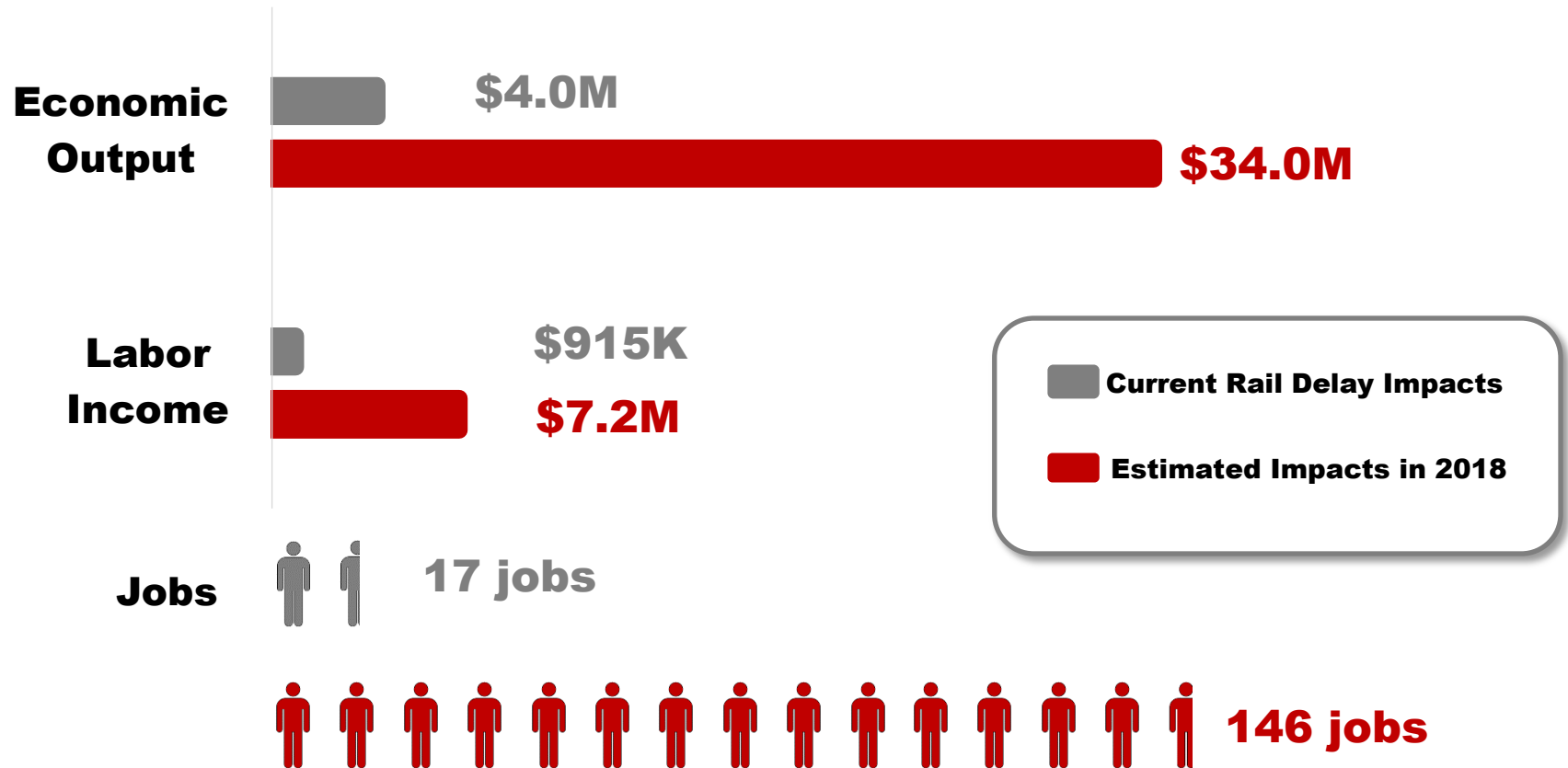
*Modeled in 2016*



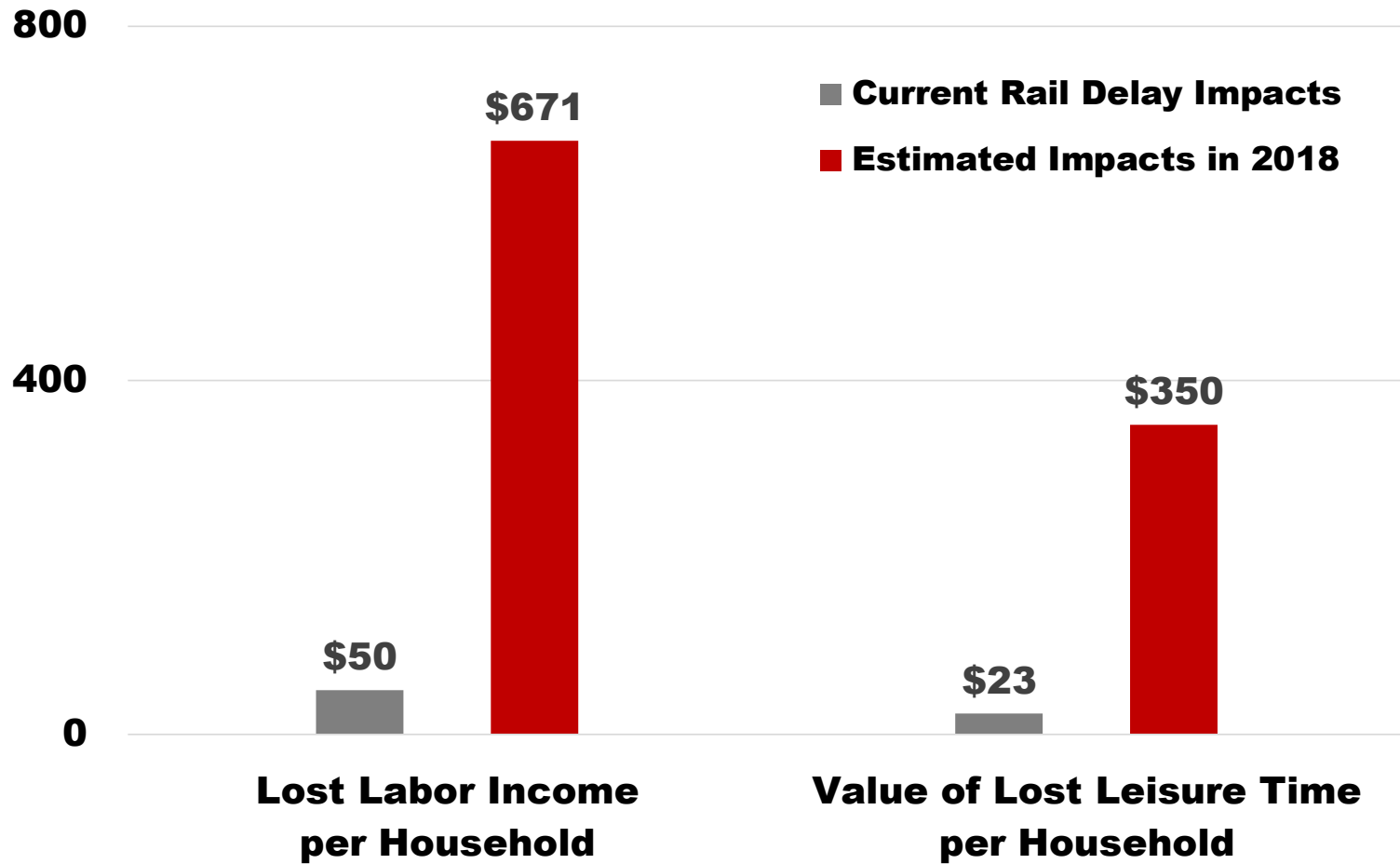


# 2018 Economic Impact

## *After Start of Increased Train Traffic*



# Economic Impacts in Context



# Next Steps

- Define alternative solutions
- For each alternative:
  - Quantify train delays
  - Determine economic impacts
  - Estimate construction costs
- Focus the attention of INDOT on our problem

# Questions

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